

### WHAT IS CLAIMED IS:

1. A bicycle transmission control device comprising:

(a) a fixed housing having a fixing through hole for fitting the housing on a handlebar of the bicycle, one side of the housing being recessed to form an annular cavity having an inner and an outer circumferential walls, one end of the fixed housing being formed with a cord hole, one end of a steel cord passing through the cord hole out of the housing to connect with the bicycle transmission system;

(b) a locating member having a first locating section disposed on one of the outer and inner circumferential walls of the annular cavity;

(c) a rotary member having a central through hole for fitting the rotary member on the handlebar;

(d) a turning member having a central through hole for fitting the turning member on the handlebar, the turning member being mounted on the rotary member, a linking section protruding from inner side of the turning member and extending into the annular cavity; and

(e) a locking member having a length larger than a width of the annular cavity, the locking member being pivotally drivable by the linking section of the turning member and slidable within the annular cavity of the fixed housing, one end of the locking member being formed with a second locating section, the other end of the steel cord being hooked with the other end of the locking member to always resiliently pull the locking member, whereby the second locating section is biased

toward the first locating section of the fixed housing, the length of the locking member being larger than the width of the annular cavity so that when the locking member is pivotally rotated within the annular cavity, two ends of the locking member will respectively abut against the outer and inner circumferential walls of the annular cavity to prevent the locking member from further rotating, whereby the second locating section of the locking member will firmly engage with the first locating section.

2. The bicycle transmission control device as claimed in claim 1, wherein one of the first locating section of the locating member and the second locating section of the locking member has multiple ratchets, while the other has at least one ratchet.

3. The bicycle transmission control device as claimed in claim 1, wherein the locking member includes a main body, a first end of the main body being formed with a second locating section, a dent being formed on a sideboard of the main body, the dent having a profile intersecting a moving path of the linking section, whereby the linking section of the turning member can press the profile of dent to forcedly make the second locating section of the locking member disengage from the first locating section of the fixed housing.

4. The bicycle transmission control device as claimed in claim 1, wherein the locating member is integrally formed on one of the inner and outer circumferential walls of the annular cavity.

5. The bicycle transmission control device as claimed in claim 1, wherein the locating member is integrally detachably

mounted on one of the inner and outer circumferential walls of the annular cavity.

6. The bicycle transmission control device as claimed in claim 1, further comprising a leaf spring and a torque adjustment pad, the torque adjustment pad being fixed on a sidewall of the annular cavity, the torque adjustment pad being tapered in a winding direction of the steel cord, a first end of the leaf spring being fixed on the locking member, a second end of the leaf spring resiliently abutting against the torque adjustment pad.

7. The bicycle transmission control device as claimed in claim 6, wherein the torque adjustment pad is locked on the outer circumferential wall of the annular cavity by an adjustment screw, the adjustment screw being slidable and adjusted within a slide slot of the outer circumference of the annular cavity, whereby the position where torque adjustment pad is mounted on the sidewall of the annular cavity can be adjusted and a user can adjust the resistance against the rotary member according to a using state.

8. The bicycle transmission control device as claimed in claim 6, wherein one end of the torque adjustment pad is pivotally connected on the outer circumferential wall of the annular cavity, an adjustment screw being screwed through the outer circumference of the annular cavity into the other end of the torque adjustment pad, whereby by means of rotating the adjustment screw, the gradient of the torque adjustment pad relative to the annular cavity can be adjusted and a user can

adjust the resistance against the rotary member according to a using state.

9. The bicycle transmission control device as claimed in claim 1, wherein the turning member is integrally formed on the rotary member.

10. The bicycle transmission control device as claimed in claim 1, wherein the turning member is detachably mounted on the rotary member.

11. A bicycle transmission control device comprising:

(a) a fixed housing having a fixing through hole for fitting the housing on a handlebar of the bicycle, one side of the housing being recessed to form an annular cavity having an inner and an outer circumferential walls, one end of the fixed housing being formed with a cord hole, one end of a steel cord passing through the cord hole out of the housing to connect with the bicycle transmission system;

(b) a locating member having a first locating section, the locating member being obliquely disposed in and across the annular cavity;

(c) a rotary member having a central through hole for fitting the rotary member on the handlebar;

(d) a turning member having a central through hole for fitting the turning member on the handlebar, the turning member being mounted on the rotary member, a linking section protruding from inner side of the turning member and extending into the annular cavity; and

(e) a locking member having a length larger than a

width of the annular cavity, the locking member being pivotally drivable by the linking section of the turning member and slidable within the annular cavity of the fixed housing, one end of the locking member being formed with a second locating section, the other end of the steel cord being hooked with the end of the locking member where the second locating section is formed, the steel cord always resiliently pulling the locking member, whereby the second locating section is biased toward the first locating section of the fixed housing, the length of the locking member being larger than the width of the annular cavity so that when the locking member is pivotally rotated within the annular cavity, two ends of the locking member will respectively abut against the outer and inner circumferential walls of the annular cavity to prevent the locking member from further rotating, whereby the second locating section of the locking member will firmly engage with the first locating section.

12. The bicycle transmission control device as claimed in claim 11, wherein one of the first locating section of the locating member and the second locating section of the locking member has multiple ratchets, while the other has at least one ratchet.

13. The bicycle transmission control device as claimed in claim 11, wherein the locking member includes a main body, a first end of the main body being formed with a second locating section, a dent being formed on a sideboard of the main body, the dent having a profile intersecting a moving path of the linking section, whereby the linking section of the turning member can press the profile of dent to forcedly make the second

locating section of the locking member disengage from the first locating section of the fixed housing.

14. The bicycle transmission control device as claimed in claim 11, wherein the locating member is integrally formed on one of the inner and outer circumferential walls of the annular cavity.

15. The bicycle transmission control device as claimed in claim 11, wherein the locating member is integrally detachably mounted on one of the inner and outer circumferential walls of the annular cavity.

16. The bicycle transmission control device as claimed in claim 11, wherein the turning member is integrally formed on the rotary member.

17. The bicycle transmission control device as claimed in claim 16, wherein the turning member is detachably mounted on the rotary member.

18. The bicycle transmission control device as claimed in claim 11, further comprising a leaf spring, two ends of the leaf spring abutting against the outer circumferential wall of the annular cavity, a section of the leaf spring abutting against the locking member, whereby the second locating section of the locking member abuts against the first locating section.

19. A bicycle transmission control device comprising:

(a) a fixed housing having a fixing through hole for fitting the housing on a handlebar of the bicycle, one side of the housing being recessed to form an annular cavity having an inner and an outer circumferential walls, one end of the fixed

housing being formed with a cord hole, one end of a steel cord passing through the cord hole out of the housing to connect with the bicycle transmission system;

(b) a locating member having a first locating section disposed on the outer circumferential walls of the annular cavity;

(c) a rotary member having a central through hole for fitting the rotary member on the handlebar;

(d) a turning member having a central through hole for fitting the turning member on the handlebar, the turning member being mounted on the rotary member, a linking section protruding from inner side of the turning member and extending into the annular cavity, the turning member further having a first unlatching section; and

(e) a locking member having a length larger than a width of the annular cavity, the locking member being pivotally drivable by the linking section of the turning member and slidable within the annular cavity of the fixed housing, one end of the locking member being formed with a second locating section and a second unlatching section, the second unlatching section being pushed by the first unlatching section to make the second locating section disengage from the first locating section, the other end of the steel cord being hooked with the other end of the locking member to always resiliently pull the locking member, whereby the second locating section is biased toward the first locating section of the fixed housing, the length of the locking member being larger than the width of the annular cavity so that when the locking member is pivotally rotated within the

annular cavity, two ends of the locking member will respectively abut against the outer and inner circumferential walls of the annular cavity to prevent the locking member from further rotating, whereby the second locating section of the locking member will firmly engage with the first locating section.

20. The bicycle transmission control device as claimed in claim 19, wherein one of the first locating section of the locating member and the second locating section of the locking member has multiple ratchets, while the other has at least one ratchet.

21. The bicycle transmission control device as claimed in claim 19, wherein the locking member includes a main body, a first end of the main body being formed with a second locating section, a dent being formed on a sideboard of the main body, the dent having a profile intersecting a moving path of the linking section, whereby the linking section of the turning member can press the profile of dent to forcedly make the second locating section of the locking member disengage from the first locating section of the fixed housing.

22. The bicycle transmission control device as claimed in claim 19, wherein the locating member is integrally formed on one of the inner and outer circumferential walls of the annular cavity.

23. The bicycle transmission control device as claimed in claim 19, wherein the locating member is integrally detachably mounted on one of the inner and outer circumferential walls of the annular cavity.

24. The bicycle transmission control device as claimed in



claim 19, further comprising a leaf spring and a torque adjustment pad, the torque adjustment pad being fixed on a sidewall of the annular cavity, the torque adjustment pad being tapered in a winding direction of the steel cord, a first end of the leaf spring being fixed on the locking member, a second end of the leaf spring resiliently abutting against the torque adjustment pad.

25. The bicycle transmission control device as claimed in claim 24, wherein the torque adjustment pad is locked on the outer circumferential wall of the annular cavity by an adjustment screw, the adjustment screw being slidable and adjusted within a slide slot of the outer circumference of the annular cavity, whereby the position where torque adjustment pad is mounted on the sidewall of the annular cavity can be adjusted and a user can adjust the resistance against the rotary member according to a using state.

26. The bicycle transmission control device as claimed in claim 24, wherein one end of the torque adjustment pad is pivotally connected on the outer circumferential wall of the annular cavity, an adjustment screw being screwed through the outer circumference of the annular cavity into the other end of the torque adjustment pad, whereby by means of rotating the adjustment screw, the gradient of the torque adjustment pad relative to the annular cavity can be adjusted and a user can adjust the resistance against the rotary member according to a using state.

27. The bicycle transmission control device as claimed in

claim 19, wherein the turning member is integrally formed on the rotary member.

28. The bicycle transmission control device as claimed in claim 27, wherein the turning member is detachably mounted on the rotary member.

29. The bicycle transmission control device as claimed in claim 27, further comprising a free ring which is rotatably fitted around the inner circumferential wall, the steel cord being directly pressed against outer circumference of the free ring, whereby the free ring can be freely rotated relative to the inner circumferential wall to prevent the steel cord from directly abrading the inner circumferential wall so as to reduce the resistance against the steel cord when extensibly sliding.

30. A bicycle transmission control device comprising:

(a) a fixed housing having a fixed through hole in which a handlebar of a bicycle is fitted, an inner circumferential wall and an outer circumferential wall being formed on one side of the fixed housing to define an annular cavity, the fixed housing further having an extension cavity having a slide passage, one end of the slide passage communicating with the annular cavity, the other end of the slide passage being formed with a cord hole, one end of a steel cord being conducted through the cord hole out of the fixed housing to connect with the transmission system of the bicycle;

(b) a locating member having a first locating section, the locating member being mounted on one sidewall of the slide passage of the extension cavity;

(c) a rotary member formed with a central through hole in which the handlebar of the bicycle is fitted, the rotary member having a first linking section;

(d) a locking member having a length larger than the width of the extension cavity, the locking member being pivotally drivable by the first linking section of the rotary member and slidably mounted in the extension cavity of the fixed housing, one end of the locking member being formed with a second locating section, the other end of the steel cord being latched with any end of the locking member, the locking member being always resiliently pulled by the steel cord to bias the second locating section toward the first locating section of the fixed housing, whereby the second locating section of the locking member is firmly engaged with the first locating section; and

(e) a link, one end of the link being pivotally connected with the locking member, the other end of the link being pivotally connected with the rotary member, by means of turning the rotary member, via the link, the locking member being driven to move along the slide passage of the extension cavity, whereby the locking member can be selectively located on the first locating section of the slide passage.

31. The bicycle transmission control device as claimed in claim 30, further comprising a slide member slidably disposed in the slide passage of the extension cavity, the slide member having a slide way in which the locking member is slidably disposed, the slide member having a second linking section for controlling the second locating section of the locking member to

engage with the first locating section or disengage therefrom.

32. The bicycle transmission control device as claimed in claim 30, further comprising a spring plate, one end of the spring plate being fixed on the locking member, the other end of the spring plate being pressed against inner wall of the slide passage of the extension cavity to always bias the second locating section of the locking member toward the first locating section.